

Title (en)

METHOD FOR DETERMINING THE MOLECULAR MASS OF CONSTITUENTS OF A CHEMICAL ELEMENT

Title (de)

VERFAHREN ZUR MOLEKULAR MASSEN-BESTIMMUNG DER BESTANDTEILEN EINES CHEMISCHEN STOFFES

Title (fr)

METHODE DE DETERMINATION DE LA MASSE MOLECULAIRE DES CONSTITUANTS D'UN CORPS CHIMIQUE

Publication

**EP 1320868 A1 20030625 (FR)**

Application

**EP 01976343 A 20010928**

Priority

- FR 0103009 W 20010928
- FR 0012465 A 20000929

Abstract (en)

[origin: WO0227757A1] The invention concerns a method for determining the molecular mass M of at least a chemical element at the output of a mass spectrometer comprising a dissociation box (16) wherein the ions of the elements supplied by an ion source are dissociated into several fragments after having struck the molecules of an inert gas (18), an electrostatic analyzer (20) wherein the fragments are subjected to an electrostatic field between two electrodes (22, 24) so as to select the fragments having a predetermined specific mass ( $m/z$ ) according to the electrostatic field and a detector (26) for detecting the fragments at the output of the electrostatic analyzer. The method consists in calculating the ratio between the masses of two unknown fragments for all the possible couples of fragment masses, comparing each of the ratios obtained with the mass ratios of standard fragments corresponding to the compounds currently obtained by dissociation of a particular element, and in determining the mass M of the element using the ratios of unknown fragments which are equal to the ratios of the standard fragments.

IPC 1-7

**H01J 49/28**

IPC 8 full level

**H01J 49/04** (2006.01)

CPC (source: EP US)

**G16C 20/20** (2019.01 - EP US); **H01J 49/0045** (2013.01 - EP US); **H01J 49/282** (2013.01 - EP US)

Citation (search report)

See references of WO 0227757A1

Designated contracting state (EPC)

AT BE CH DE GB LI

DOCDB simple family (publication)

**WO 0227757 A1 20020404**; AU 9564501 A 20020408; EP 1320868 A1 20030625; FR 2814811 A1 20020405; FR 2814811 B1 20021206; US 2003052267 A1 20030320

DOCDB simple family (application)

**FR 0103009 W 20010928**; AU 9564501 A 20010928; EP 01976343 A 20010928; FR 0012465 A 20000929; US 14800402 A 20020524